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ABSTRACT OF THE DISCLOSURE

There is disclosed a frequency synthesizer having an HF synthesizer for generating a first reference frequency signal having a variable frequency in a highfrequency band as a unit synthesizer, an LF synthesizer for generating a second reference frequency signal in a low-frequency band as another unit synthesizer, and an arithmetic circuit including a mixer for receiving the first and second reference frequency signals, a divider for receiving the second reference frequency signal, a mixer for receiving the first reference frequency signal and an output signal from the divider, a divider for receiving an output signal from the mixer, a divider for receiving an output signal from the mixer and capable of switching a division ratio, and a switch for switching and outputting output signals from the dividers, wherein an output signal of the switch is outputted as a first local signal, and an output signal from the divider is outputted as a second local signal.